

What is claimed is:

1. A battery pack comprising a plastic protective layer bonded to the surface of a cell by spreading over the surface
5 of the cell a polyurethane emulsion comprising a reaction product obtained by emulsifying and dispersing an intermediate product produced from a compound A made of an organic diisocyanate, a compound B1 made of a polyol mixture having not smaller than at least 2.05 average functional groups and a compound B2 having
10 one hydrophilic center and at least two active hydrogen groups in water.

2. The battery pack as described in Claim 1, wherein a holder having an output terminal attached thereto at a
15 predetermined position is fixed to the end of a cell, the periphery of the holder follows the periphery of the cell and a polyurethane emulsion is spread over the surface extending from the periphery of the cell to the periphery of the holder so that a plastic protective layer is bonded to the periphery
20 of the cell and the holder and the holder and the cell are connected to each other at their border with the plastic protective layer.

3. The battery pack as described in Claim 2, wherein the holder is bonded and thus fixed to the cell.

4. The battery pack as described in Claim 2, wherein the holder is fixed to the cell with a rivet.

5. The battery pack as described in Claim 2, wherein
5 a protective element is provided interposed between the holder and the cell.

6. The battery pack as described in Claim 1, wherein the compound B1 is a polyol mixture of a bifunctional polyol
10 and a trifunctional or higher polyol.

7. The battery pack as described in Claim 1, wherein the compound B1 is a polyol mixture of a bifunctional polyol and a trifunctional polyol the average number of functional
15 groups of which is from 2.05 to 2.6.

8. The battery pack as described in Claim 6 or 7, wherein the molecular weight of the trifunctional polyol is smaller than the molecular weight of the bifunctional polyol.
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9. The battery pack as described in Claim 1, wherein the polyurethane emulsion has a pigment incorporated therein.

10. The battery pack as described in Claim 9, wherein
25 the pigment is a carbon black.

11. The battery pack as described in Claim 10, wherein the polyurethane emulsion having a carbon black incorporated therein is irradiated with a laser beam to display letters, patterns, signs, etc.

12. The battery pack as described in Claim 1, wherein the polyurethane emulsion has a thixotropic material incorporated therein.

13. A process for the production of a battery pack which comprises spreading a polyurethane emulsion comprising a reaction product obtained by emulsifying and dispersing an intermediate product produced from a compound A made of an organic diisocyanate, a compound B1 made of a polyol mixture having not smaller than at least 2.05 average functional groups and a compound B2 having one hydrophilic center and at least two active hydrogen groups in water over the surface of a cell, and then curing the polyurethane emulsion thus spread to coat the surface of the cell with the plastic protective layer.

14. The process for the production of a battery pack as described in Claim 13, wherein the cell is dipped in the polyurethane emulsion to coat the surface of the cell with the polyurethane emulsion.

15. The process for the production of a battery pack as described in Claim 13, wherein the polyurethane emulsion is spread over the surface of the cell using a roller.

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16. The process for the production of a battery pack as described in Claim 13, which comprises attaching to the end of the cell a holder having an output terminal attached thereto at a predetermined position and the periphery of which follows
10 the periphery of the cell, and then spreading the polyurethane emulsion over the area extending from the periphery of the cell to the periphery of the holder so that a plastic protective layer is bonded to the periphery of the cell and the holder and the holder and the cell are connected to each other at their
15 border with the plastic protective layer.

17. The process for the production of a battery pack as described in Claim 16, wherein the holder is bonded and thus fixed to the cell.

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18. The process for the production of a battery pack as described in Claim 16, wherein the holder is fixed to the cell with a rivet.

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19. The process for the production of a battery pack

as described in Claim 13, wherein the compound B1 is a polyol mixture of a bifunctional polyol and a trifunctional or higher polyol.

5 20. The process for the production of a battery pack as described in Claim 13, wherein the compound B1 is a polyol mixture of a bifunctional polyol and a trifunctional polyol the average number of functional groups of which is from 2.05 to 2.6.

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 21. The process for the production of a battery pack as described in Claim 13, wherein the polyurethane emulsion has a pigment incorporated therein.

15 22. A process for the production of a battery pack which comprises a core pack assembly step of attaching to the end of the cell a holder having an output terminal attached thereto at a predetermined position and the periphery of which follows the periphery of the cell to form a battery core pack and a
20 step of applying a stress to an adhesive solution comprising a thixotropic material incorporated therein to form a liquid adhesive and dipping at least a part of the holder and the cell in the liquid adhesive to spread the adhesive solution over the area extending from the periphery of the cell to the periphery
25 of the holder so that the surface of the cell is coated with

a plastic protective layer formed by curing the adhesive solution and the holder is connected to the cell with the plastic protective layer.

5 23. The process for the production of a battery pack as described in Claim 22, wherein the adhesive solution is a polyurethane-based adhesive, acrylic adhesive, epoxy-based adhesive or silicon-based adhesive.

10 24. The process for the production of a battery pack as described in Claim 22, wherein the adhesive solution is a polyurethane emulsion comprising a reaction product obtained by emulsifying and dispersing an intermediate product produced from a compound A made of an organic diisocyanate, a compound
15 B1 made of a polyol mixture having not smaller than at least 2.05 functional groups on the average and a compound B2 having one hydrophilic center and at least two active hydrogen groups in water.

20 25. The process for the production of a battery pack as described in Claim 24, wherein the compound B1 is a polyol mixture of a bifunctional polyol and a trifunctional or higher polyol.

25 26. The process for the production of a battery pack

as described in Claim 24, wherein the compound B1 is a polyol mixture of a bifunctional polyol and a trifunctional polyol the average number of functional groups of which is from 2.05 to 2.6.

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27. The process for the production of a battery pack as described in Claim 25 or 26, wherein the molecular weight of the trifunctional polyol is smaller than the molecular weight of the bifunctional polyol.

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28. The process for the production of a battery pack as described in Claim 24, wherein the polyurethane emulsion has a pigment incorporated therein.